

No.

200400239



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agricultural Research Institute of the
Hungarian Academy of Sciences

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PLANT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Carlisle'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twentieth day of September, in the year two thousand and four.

Carlisle

Secretary of Agriculture

Attest:

Blmzel

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service



GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Canada: first commercial sales 2002

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Canada: Registration No. 5551, date 15.10.2002, Canadian Plant Breeders Rights, Application No. 02-3020, Certificate No. 1672 (December 2003)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**EXHIBIT A ORIGIN AND BREEDING HISTORY OF THE VARIETY**

Name of applicant : Agricultural Research Institute of
The Hungarian Academy of Sciences

Experimental Number : **Carlisle (ACS 98091) Hard Red Winter Wheat**

Carlisle is a hard red winter wheat variety bred by the Agricultural Research Institute of the Hungarian Academy of Sciences, Martonvasar in Hungary. The variety is the result of the following crosses and selections:

Pedigree : (MvMA x Mv12) x F 2098W2-21

MvMa = Kavkaz/Olesen//Tp114-65A/Martonvasari-3
Mv12 = Mironovskaya 808/Bezostaya 1//Bezostaya 1/3/
Bezostaya 1/Produttore//Bezostaya 1
F 2098W2-21 = Line from Fundulea, Romania

The final cross was made in 1989. F1 seed were bulked at harvest 1990; the F2 to F8 generations were grown and selected in Hungary. Selection criteria were winter hardiness, bread making quality, yield and disease resistance to powdery mildew and Fusarium head blight.

Agronomically acceptable rows were selected; 25 such rows were multiplied. Testing of agronomic values started in F9 generation in Canada and Europe.

Since then successive generations were tested in various U.S. states, mainly in Montana and Wisconsin.

Stages of Selection and Multiplication

From these 25 rows 2 lines were finally selected and bulked.

Breeder seed was planted in 2002 and approximately 50 acres in the spring of 2003 for the purpose of producing Foundation seed.

Carlisle will be maintained at Oberlímpurg throughout the duration of Plant Variety Protection, based on 800 single plant progenies sown annually as "ear to row".

Negative selection is based on obvious criteria in all stages from 4-leaf-stage to harvest. Breeder seed production is generated from this material.

Uniformity and Stability Statement

Carlisle has been observed for 4 generations of increase and is stable and uniform.

Variants appear in Carlisle at a frequency of about 40 in 10,000. 20 of 10,000 variants are apically awned, 20 of 10,000 are taller (> 10 cm).



"CARLISLE (ACS 98091)"

20.7.2004

Hard Red Winter Wheat

Exhibit B Statement of Distinctness

Carlisle is most similar to the variety CDC Falcon; however Carlisle differs from plant height (82,5 cm vs. 86,5 cm) and ear emergence (Carlisle is two days earlier). The glume shoulders of Carlisle are elevated where the glume shoulders of CDC Falcon are wanting. Carlisle has better quality results than CDC Falcon (see table 1).

Table 1. Quality characteristics of Carlisle compared to check variety CDC Falcon in Western Plant Breeders (Bozeman and Moses Lake) trials (avg. of 2 locations).

<u>Entry</u>	<u>Heading Date Julian Days</u>	<u>Plt. Ht. (cm)</u>	<u>T.W. (lbs/bu)</u>	<u>Protein %</u>	<u>SED (mm)</u>
CDC Falcon ML, WA 2003			63,9	13,1	108
CDC Falcon BZ, MT 2003	170	84	61,5	12,0	84
CDC Falcon BZ, MT 2002	<u>175</u>	<u>89</u>	<u>61,8</u>	<u>12,3</u>	<u>109</u>
AVG	172,5	86,5	62,4	12,5	100
Carlisle ML, WA 2003			65,0	14,3	105
Carlisle BZ, MT 2003	169	79	62,4	14,2	102
Carlisle BZ, MT 2002	<u>173</u>	<u>86</u>	<u>64,1</u>	<u>13,3</u>	<u>103</u>
AVG	171,0	82,5	63,8	13,9	103

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY
Wheat (*Triticum* spp.)**

NAME OF APPLICANT (S) DR. PETER FRANCK	TEMPORARY OR EXPERIMENTAL DESIGNATION ACS 98091	VARIETY NAME Carlisle
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) ACS-PZO Pflanzenzucht Oberlumpurg Oberlumpurg 2 D-74523 Schwabisch Hall GERMANY		FOR OFFICIAL USE ONLY PVPO NUMBER 200400239

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

- 1 = Common
2 = Durum
3 = Club
4 = Other (Specify) _____

2. VERNALIZATION:

- 1 = Spring
2 = Winter
3 = Other (Specify) _____

3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

- 1 = Prostrate 2 = Semi-Erect 3 = Erect

5. PLANT COLOR: (boot stage)

- 1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF: (boot stage)

- 1 = Erect 2 = Recurved
1 = Not Twisted 2 = Twisted
3 = Wax Absent 3 = Wax Present

7. EAR EMERGENCE: Days from January 1

<input type="text" value="1"/>	<input type="text" value="7"/>	<input type="text" value="1"/>
<input type="text" value="0"/>	<input type="text" value="2"/>	

Number of Days (average)

Number of Days Earlier Than
Same as

<input type="text" value=""/>	<input type="text" value=""/>
-------------------------------	-------------------------------

Number of Days Later Than

* CDC Falcon

*

*

*Relative to a Commercial Variety Grown in the Same Trial

8. ANTER COLOR:

- 1 = Yellow 2 = Purple

* 9. PLANT HEIGHT: (from soil to top of head, excluding awns)

0	8	3	cm (Average)
			cm Taller Than
			Same as
	4		cm Shorter Than

* _____

* _____

* CDC Falcon

*Relative to a Commercial Variety Grown in the Same Trial

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10. STEM:

A. ANTHOCYANIN

1	1 = Absent	2 = Present
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B. WAXY BLOOM

2	1 = Absent	2 = Present
---	------------	-------------

C. HAIRINESS (last internode of rachis)

1	1 = Absent	2 = Present
---	------------	-------------

D. INTERNODE

2	1 = Hollow	2 = Semi-Solid	3 = Solid
---	------------	----------------	-----------

Number of Nodes

E. PEDUNCLE

1	1 = Erect	2 = Recurved	3 = Semi-Erect
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cm Length

F. AURICLE

1	Anthocyanin:	1 = Absent	2 = Present
1	Hair:	1 = Absent	2 = Present

11. HEAD: (at maturity)

A. DENSITY

3	1 = Lax
	2 = Mid-dense (Laxidense)
	3 = Dense

B. SHAPE

1	1 = Tapering
	2 = Strap
	3 = Clavate
	4 = Other (Specify) _____

C. CURVATURE

2	1 = Erect
	2 = Inclined
	3 = Recurved

D. AWNEDNESS

4	1 = Awnless
	2 = Apically Awnletted
	3 = Awnletted
	4 = Awned

12. GLUMES: (at maturity)

A. COLOR

1	1 = White
	2 = Tan
	3 = Other (Specify) _____

B. SHOULDER

5	1 = Wanting	2 = Oblique
	3 = Rounded	4 = Square
	5 = Elevated	6 = Apiculate
	7 = Other (Specify) _____	

C. SHOULDER WIDTH

1	1 = Narrow
	2 = Medium
	3 = Wide

D. BEAK

3	1 = Obtuse
	2 = Acute
	3 = Acuminate

E. BEAK WIDTH

2	1 = Narrow
	2 = Medium
	3 = Wide

F. GLUME LENGTH

2	1 = Short (ca. 7mm)
	2 = Medium (ca. 8mm)
	3 = Long (ca. 9mm)

G. WIDTH

2	1 = Narrow (ca. 3mm)
	2 = Medium (ca. 3.5mm)
	3 = Long (ca. 4mm)

13. SEED

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A. SHAPE

- ☐ 1 1 = Ovate
2 = Oval
3 = Elliptical

E. COLOR

- ☐ 3 1 = White
2 = Amber
3 = Red
4 = Other (Specify) _____

B. CHEEK

- ☐ 1 1 = Rounded
2 = Angular

F. TEXTURE

- ☐ 1 1 = Hard
2 = Soft
3 = Other (Specify) _____

C. BRUSH

- ☐ 2 1 = Narrow ☐ 1 = Not Collared
2 = Medium 2 = Collared
3 = Wide

G. PHENOL REACTION

- ☐ 4 1 = Ivory 4 = Dark Brown
2 = Fawn 5 = Black
3 = Light Brown

D. CREASE

- ☐ 2 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width nearly as Wide as Kernel

H. SEED WEIGHT

- ☐ 4 ☐ 5 g/1000 Seed (whole number only)

- ☐ 2 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

I. GERM SIZE

- ☐ 2 1 = Small
2 = Mid-Size
3 = Large

14. DISEASE (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)
PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input type="checkbox"/> 0	Stem Rust (<i>Puccinia graminis f. sp. tritici</i>)	<input type="checkbox"/> 3	Leaf Rust (<i>Puccinia recondita f. sp. tritici</i>)
<input type="checkbox"/> 3	Stripe Rust (<i>Puccinia striiformis</i>)	<input type="checkbox"/> 0	Loose Smut (<i>Ustilago tritici</i>)
<input type="checkbox"/> 0	Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input type="checkbox"/> 0	Flag Smut (<i>Urocystis agropyri</i>)
<input type="checkbox"/> 0	Halo Spot (<i>Selenophoma donacis</i>)	<input type="checkbox"/> 0	Common Bunt (<i>Tilletia tritici</i> or <i>T. Laevis</i>)
<input type="checkbox"/> 3	Septoria nodorum (Glume Blotch)	<input type="checkbox"/> 0	Dwarf Bunt (<i>Tilletia controversa</i>)
<input type="checkbox"/> 0	Septoria avenae (Speckled Leaf Disease)	<input type="checkbox"/> 0	Karnal Bunt (<i>Tilletia indica</i>)
<input type="checkbox"/> 3	Septoria tritici (Speckled Leaf Blotch)	<input type="checkbox"/> 3	Powdery Mildew (<i>Erysiphe graminis f. sp. tritici</i>)
<input type="checkbox"/> 3	Scab (<i>Fusarium spp.</i>)	<input type="checkbox"/> 0	"Snow Molds"
<input type="checkbox"/> 0	"Black Point" (Kernel Smudge)	<input type="checkbox"/> 0	Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris spp.</i>)
<input type="checkbox"/> 0	Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0	Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 0	Soilborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0	Black Chaff (<i>Xanthomonas campestris pv. translucens</i>)
<input type="checkbox"/> 0	Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0	Bacterial Leaf Blight (<i>Pseudomonas syringae pv. syringae</i>)
<input type="checkbox"/> 0	Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Other (Specify) _____	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Other (Specify) _____	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Other (Specify) _____	<input type="checkbox"/>	Other (Specify) _____

15. INSECT

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)
PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 0	Hessian Fly (<i>Mayetiola destructor</i>)	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/> 0	Stem Sawfly (<i>Cephus spp.</i>)	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/> 0	Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/>	Other (Specify) _____

15. INSECT (continued)

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

0
0
0

Russian Aphid (*Diuraphis noxia*)Greenbug (*Schizaphis graminum*)

Aphids

Other (Specify)

Other (Specify)

Other (Specify)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

Carlisle Quality Data: Grain Quality Lab, Agriculture Canada, Ottawa

Flour Characteristics

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						FARINOGRAPH DATA					Loaf	Starch	Agtron
						ABSN	PK TM	Stab	MTI	TMD	Volume	Damage	Colour
Flour	Flour	Prt	Flour										
Yield	Prt	Diff	Ash										
1999													
Karat	chk	76.9	12.10	1.05	0.39	60.0	2.3	9.0	13	65	765	5.10	
Fundulea		74.0	11.45	0.99	0.39	57.7	4.3	4.5	45	129	747	4.16	
Carlisle		76.4	11.70	1.04	0.39	59.5	2.8	10.3	16	62	785	5.30	
CWRS (12.5)		75.2	12.04	0.67	0.46	60.5	5.9	7.3	29	69	825	5.52	
2000													
Karat	chk	76.2	10.82	0.74	0.41	57.3	2.0	4.1	39	153	802	4.75	67.0
Fundulea		73.0	10.72	0.96	0.46	56.1	4.0	4.1	61	123	775	4.22	64.0
Carlisle		77.3	10.21	0.87	0.42	58.4	2.3	5.6	33	109	720	5.18	68.7
CWRS (12.5)		75.2	12.04	0.67	0.46	60.5	5.9	7.3	29	69	825	5.52	
2 Year													
Karat	chk	76.6	11.60		0.41	58.8	4.4	5.7	37	113	812	4.82	
Fundulea		73.0	11.07		0.43	56.8	4.2	4.1	55	120	763	4.09	
Carlisle		76.9	10.96		0.41	59.0	2.6	8.0	25	86	753	5.24	

Kernel Characteristics

CULTIVAR	CGC	Fus	Test	TKW	Kernel	Grain	Grain	Fall
	Grade	Dmg	Weight		Hard	Protein	Ash	#
1999								
Karat	chk	1	0.10	84.2	32.5	52.7	13.15	1.33
Fundulea		1	0.00	84.3	32.7	59.3	12.43	1.35
Carlisle		1	0.00	84.1	41.3	52.0	12.75	1.29
CWRS (12.5)		1	0.10	83.5	31.7	52.3	12.71	1.60
2000								
Karat	chk	1	0.82	78.6	32.7	56.6	11.56	1.69
Fundulea		1	0.34	79.4	29.1	62.5	11.68	1.62
Carlisle		2	0.58	81.1	37.3	54.8	11.08	1.48
CWRS (12.5)		1	0.1	83.5	31.7	52.3	12.71	1.6
2 Year								
Karat	chk			81.1	34.5	56.7	12.22	1.60
Fundulea				81.0	31.0	64.0	11.89	1.56
Carlisle				82.6	39.3	53.4	11.92	1.39

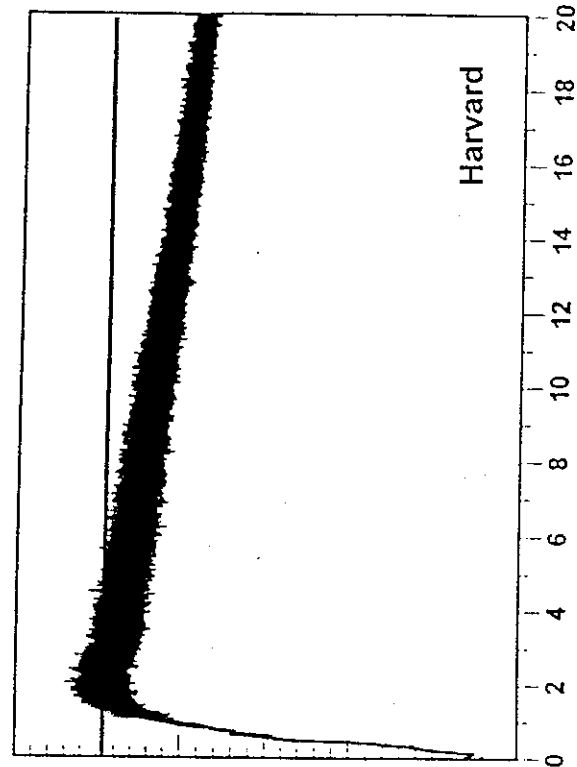
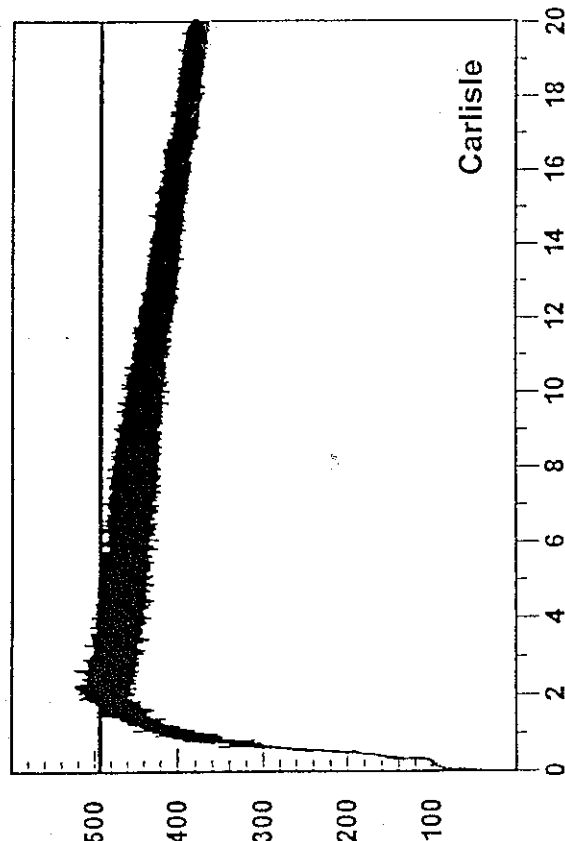
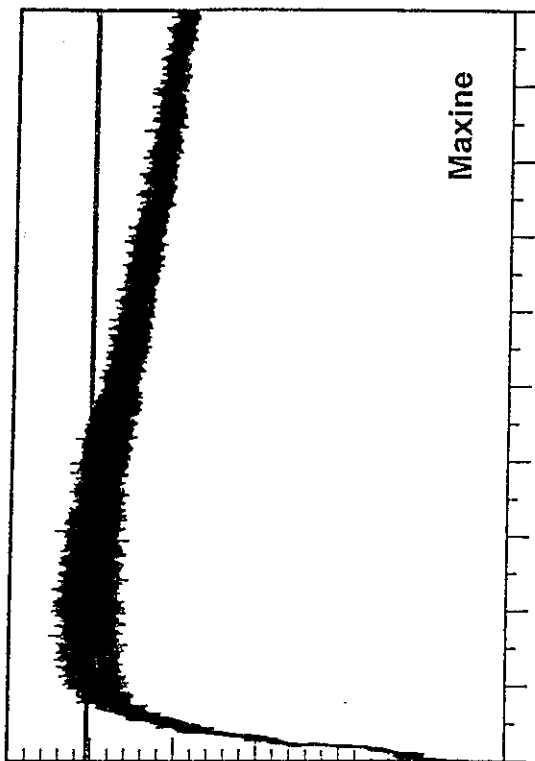
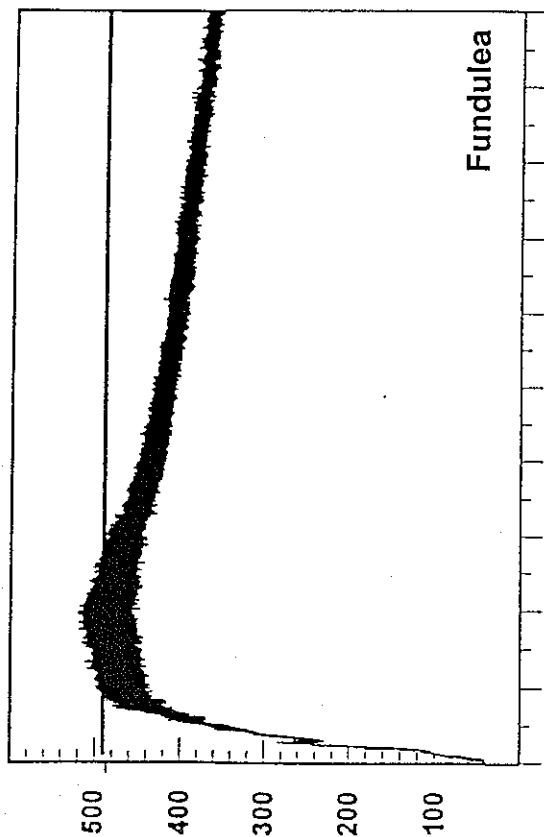
Locations:

1999: Woodslee, Nairn, Ottawa

2000: Woodstock, Woodslee, Nairn, Palmerston, Chatham, Centralia, Ottawa

Hard Red Winter Wheat

Ontario Hard Red Winter Wheat Registration Test
Results from Grain Quality Lab, ECORC



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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Agricultural Research Inst. of Hungarian Acad. of Sciences	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ACS 98091	3. VARIETY NAME Carlisle
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Brunsvik u. 2 H-2462 Martonvasar Hungary	5. TELEPHONE (Include area code) 0036-22569500	6. FAX (Include area code) 0036-22460213
7. PVPO NUMBER 200400239		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☐ YES☒ NO

HUNGARY

10. Is the applicant the original owner?

☒ YES☐ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES☒ NO

If no, give name of country

HUNGARY

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☒ YES☐ NO

If no, give name of country

HUNGARY

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

See additional declaration of legal representative attached.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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Agricultural Research Institute of the Hungarian Academy of Sciences

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11. Okt. 2002

Erl.....


Authorization

The Agricultural Research Institute of the Hungarian Academy of Sciences, Martonvásár (H-2462 Martonvásár, Brunszvik u. 2, Hungary) as the variety owner of the winter wheat genotype ACS 98091 (Breeders reference:Mv106-97) hereby authorizes Dr. Peter Franck, PZO Pflanzenzucht Oberlimpurg, D-74523 Schwäbisch Hall, Germany) to carry out variety maintenance and to produce breeder's seed.


Dr. Zoltán Bedő
director



Martonvásár, 2002. 09. 27.

ACS - PZO 

Dr. Peter Franck

PZO
Pflanzenzucht
Oberlimpurg
74523 Schwäbisch Hall



Agricultural Research Institute of the Hungarian Academy of Sciences
2462 Martonvásár, P. O. Box 19, Phone: +36 (22) 569 500, Fax: +36 (22) 460 213, <http://www.mgki.hu>

Authorization of Legal Representative

I/we hereby declare that the applicant:

**PZO Pflanzenzucht Oberlimpurg
ACS – PZO
D 74523 Schwaebisch Hall,**

Is the legal representative of:

**Agricultural Research Institute of the
Hungarian Academy of Sciences
H 2462 Martonvásár, Hungary**

and authorized to act for all purposes of this act (Application for Registration and Application for Plant Protection), on behalf of me/us as my/our representative for the

winter wheat variety

ACS 98091

.....
Signature /Date

Dr. Zoltán Bedő

Director

Agricultural Research Institute of
the Hungarian Academy of Sciences



.....
Signature /Date

Dr. P. Franck

Legal Representative

CEO of PZO /ACS - PZO